

Mineral Industry Surveys

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TUNGSTEN IN NOVEMBER 1999

On the basis of revised data, U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from hydrogen-reduced metal powder, was basically the same during January through November of 1999 and January through November of 1998, according to the U.S. Geological Survey.

U.S. reported consumption of ferrotungsten, tungsten metal powder, tungsten carbide powder, tungsten scrap, and other tungsten materials during the first 11 months of 1999 was 13% lower than that of the same period in 1998. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for November 1999 will be published in a subsequent issue.

significant digits. Totals and percentages were calculated by using unrounded data.

Update

Prices for tungsten ore concentrates in dollars per metric ton unit from Metal Bulletin are listed below. Prices in dollars per short ton unit were converted from metric ton unit prices and rounded to the nearest dollar. These prices represent combined prices for wolframite and scheelite ore concentrates with a minimum tungsten trioxide (WO_3) content of 65%. The prices for December 1 to 31 are as follows:

Low—\$38/metric ton unit WO_3 (\$34/short ton unit WO_3)
High—\$48/metric ton unit WO_3 (\$44/short ton unit WO_3)

Note

All data in this report have been rounded to no more than three

TABLE 1
U.S. SALIENT TUNGSTEN STATISTICS 1/

(Metric tons, tungsten content)

Period	Concentrate			Reported scrap consumption	Intermediate products		
	Reported consumption	Imports for consumption	Stocks, end of period 2/		Net production 3/	Reported consumption 4/	Stocks, end of period 5/
1998:							
November	W	158	503	223	680	703	1,400
December	449	811	514	178	621	614	1,340
January-December 6/	3,210	4,750	XX	3,300	9,630	8,980	XX
1999:							
January	W	129	589 r/	278 r/	812 r/	671 r/	1,420 r/
February	W	156	W	307 r/	711 r/	699 r/	1,430 r/
March	W	714	308 r/	343 r/	816 r/	669 r/	1,490 r/
April	348 r/	90	W	302 r/	767 r/	630 r/	1,390 r/
May	388 r/	383	W	306 r/	832 r/	647 r/	1,470 r/
June	313 r/	662	W	305 r/	784 r/	596 r/	1,440 r/
July	333 r/	232	531 r/	228 r/	721 r/	646 r/	1,430 r/
August	323 r/	145	513 r/	294 r/	829 r/	667 r/	1,420 r/
September	354 r/	94	W	267 r/	940 r/	702 r/	1,360 r/
October	W	133	W	334 r/	955 r/	678 r/	1,450 r/
November	W	NA	W	254	700	658	1,480
Total 6/	2,060	NA	XX	3,220	8,870	7,260	XX

r/ Revised. NA Not available. W Withheld to avoid disclosing company proprietary data; not included in total or year-to-date. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Reported by consumers.

3/ Net production of tungsten metal powder, tungsten carbide powder, chemicals, and other products.

4/ Includes estimates and scrap.

5/ Reported by producers.

6/ Does not include withheld data.

TABLE 2
U.S. PRODUCTION, CONSUMPTION, AND STOCKS OF
AMMONIUM PARATUNGSTATE, BY MONTH 1/

(Metric tons, tungsten content)

Period	Production	Consumption	Stocks, end of period 2/
1998:			
November	W	414	586
December	W	718	603
January-December 3/	838	9210	XX
1999:			
January	W	536 r/	582 r/
February	W	474 r/	512 r/
March	W	831 r/	542 r/
April	W	701 r/	476 r/
May	W	739 r/	496 r/
June	W	W	648 r/
July	W	821 r/	503 r/
August	W	723 r/	505 r/
September	W	726 r/	448 r/
October	W	870 r/	496 r/
November	W	728	449
Total 3/	W	7150	XX

r/ Revised. W Withheld to avoid disclosing company proprietary data; not included in total or year-to-date. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Producers and consumers.

3/ Does not include withheld data.

TABLE 3
U.S. PRODUCTION AND STOCKS OF TUNGSTEN PRODUCTS 1/

(Metric tons, tungsten content)

Product	Net production 2/				Stocks at end of period		
	1999				Year to date	1999	
	1998	October	November			October	November
Metal powder	4,600	543 r/	316	4,310	719	777 r/	778
Tungsten carbide powder (made from metal powder)	5,040	412 r/	384	4,560	576	578 r/	568
Cast and crystalline carbide powder; other	W	W	W	W	W	W	W
Chemicals	W	W	W	W	46	98 r/	131
Total 3/	9,630	955 r/	700	8,870	1,340	1,450 r/	1,480

r/ Revised. W Withheld to avoid disclosing company proprietary data; not included in total.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Gross production less quantity used to make other products in table.

3/ Does not include withheld data.

TABLE 4
U.S. REPORTED CONSUMPTION OF TUNGSTEN, BY END USE IN 1999 1/ 2/ 3/

(Metric tons, tungsten content)

End use	October	November	Year to date
Steel:			
Tool	W	W	W
Other	17 r/	16	163
Superalloys	28 r/	38	339
Other alloys (excludes steels and superalloys) 4/	W	W	170
Cemented carbides 5/	432 r/	435	4,930
Mill products made from metal powder	110	79	1,220
Chemical uses	W	W	W
Miscellaneous and unspecified	91	91	443
Total	678 r/	658	7,260

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Does not include materials used in making primary tungsten products.

3/ Includes estimates.

4/ Includes welding and hard-facing rods and materials, wear- and corrosion-resistant alloys, and nonferrous alloys.

5/ Includes diamond bit matrices, cemented and sintered carbides, and cast carbide dies or parts.

TABLE 5
U.S. REPORTED CONSUMPTION AND CONSUMER STOCKS OF TUNGSTEN MATERIALS 1/ 2/ 3/

(Metric tons, tungsten content)

Period	Ferro-tungsten	Tungsten metal powder	Tungsten carbide powder	Scheelite (natural, synthetic)	Tungsten scrap	Other tungsten materials 4/	Total
Consumption:							
1998:							
November	39	66	555	--	35	8	703
December	41	62	468	--	35	8	614
January-December	493	1,370	6,560	--	460	97	8,980
1999:							
January	43	95 r/	490	--	34	10	671 r/
February	43	122 r/	491	--	33	9	699 r/
March	45	98 r/	488	--	30	9	669 r/
April	43	121 r/	432	--	25	9	630 r/
May	45	141 r/	422	--	30	9	647 r/
June	41	102 r/	419	--	25 r/	10	596 r/
July	41	111 r/	456	--	28	10	646 r/
August	41	145 r/	449	--	21	10	667 r/
September	57 r/	170 r/	445	--	21 r/	9	702 r/
October	47 r/	117 r/	483 r/	--	22 r/	9	678 r/
November	46	88	487	--	27	11	658
January-November	492	1,310	5,060	--	296	103	7,260
Stocks:							
1998:							
November	15	18	514	--	41	16	604
December	18	17	431	--	36	16	517
1999:							
January	29	25	416	--	28	17	514
February	25	22	403	--	32	16	498
March	27	26	419	--	26	17	515
April	26	24	410	--	20	17	497
May	27	19	406	--	20	18	490
June	33	18	404	--	20 r/	20	494 r/
July	31	20	414	--	18	18	502 r/
August	36	22	401	--	24	17	499 r/
September	22 r/	19 r/	399	--	23 r/	17	480 r/
October	27 r/	22 r/	397	--	28 r/	16	489 r/
November	27	24	395	--	21	18	485

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Does not include materials used in making primary tungsten products.

3/ Includes estimates.

4/ Includes tungsten chemicals.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF TUNGSTEN, BY COUNTRY 1/

(Metric tons, tungsten content)

Period and country of origin	Ores and concentrates	Ammonium tungstates	Ferro-tungsten	Metal powder	Tungsten carbide powder	Other 2/	Total	Total year to date
1998	4,750	1,920	599	459	944	3,110	11,800	XX
1999:								
August	145	183	86	20	47	354	834	7,290
September	94	279	13	16	53	314	770	8,060
October:								
Australia	--	--	--	--	--	--	--	167
Austria	--	--	--	--	15	2	17	43
Belgium	--	--	--	(3/)	--	--	(3/)	3
Bolivia	57	--	--	--	--	--	57	306
Burma	--	--	--	--	--	--	--	91
Canada	--	--	--	1	35	--	36	351
China	--	78	14	11	7	121	230	4,350
Czech Republic	--	--	--	--	--	--	--	(3/)
Estonia	--	--	--	--	--	--	--	(3/)
France	--	--	--	--	--	(3/)	(3/)	2
Germany	--	18	--	4	5	6	32	237
Hong Kong	--	--	--	--	--	(3/)	(3/)	1
Hungary	--	--	--	--	--	2	2	9
India	--	--	--	--	--	--	--	(3/)
Ireland	--	--	--	--	--	--	--	(3/)
Israel	--	--	--	--	--	(3/)	(3/)	76
Italy	--	--	--	--	--	--	--	(3/)
Japan	--	--	--	2	1	3	6	40
Kazakhstan	--	--	--	--	--	--	--	461
Korea, Republic of	--	--	--	--	--	(3/)	(3/)	10
Luxembourg	--	--	--	--	--	--	--	34
Mexico	--	--	--	--	--	(3/)	(3/)	27
Mongolia	--	--	--	--	--	--	--	23
Netherlands	--	17	--	--	--	19	36	37
Peru	--	--	--	--	--	--	--	11
Portugal	75	--	--	--	--	--	75	342
Russia	--	--	--	--	14	80	94	1,820
Rwanda	--	--	--	--	--	--	--	27
Singapore	--	--	--	--	--	(3/)	(3/)	(3/)
South Africa	--	--	--	--	--	--	--	(3/)
Spain	--	--	--	--	--	(3/)	(3/)	(3/)
Sweden	--	--	--	--	--	--	--	34
Switzerland	--	--	--	--	--	(3/)	(3/)	3
Taiwan	--	--	--	--	--	--	--	(3/)
Thailand	--	--	--	--	--	--	--	11
United Kingdom	--	--	--	40	(3/)	(3/)	40	175
Total	133	113	14	58	77	233	628	8,690
Total, year to date	2,740	1,780	538	282	642	2,710	8,690	XX

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other unwrought tungsten, wrought tungsten, calcium and other tungstates, tungsten oxides, tungsten chlorides, other tungsten compounds, ash and residues containing mainly tungsten, and other mixtures of inorganic compounds containing tungsten. Tungsten content estimated in part.

3/ Less than 1/2 unit.

Note: Imports of waste and scrap in October 1999 totaled 160 metric tons, tungsten content.

Source: Bureau of the Census.

TABLE 7
U.S. EXPORTS OF TUNGSTEN, BY COUNTRY 1/

(Metric tons, tungsten content)

Period and country of destination	Ores and concentrates 2/	Ammonium tungstates	Metal powder 2/	Tungsten carbide powder	Other 3/	Total	Total year to date
1998	10	287	851	1,240	467	2,860	XX
1999:							
August	3	7	60	59	40	169	1,450
September	3	--	97	42	35	177	1,630
October:							
Argentina	--	--	(4/)	--	--	(4/)	2
Australia	--	--	(4/)	2	2	4	20
Austria	--	--	--	--	--	--	21
Belgium	--	--	--	3	(4/)	3	140
Bolivia	--	--	--	--	--	--	1
Brazil	--	--	(4/)	1	(4/)	1	38
Canada	--	--	3	14	4	21	219
Chile	--	--	--	--	--	--	3
China	--	--	--	--	1	1	4
Congo (Kinshasa)	--	--	--	--	--	--	8
Czech Republic	--	--	--	--	(4/)	(4/)	5
Denmark	--	--	--	--	--	--	7
El Salvador	--	--	--	--	(4/)	(4/)	(4/)
Finland	--	--	--	--	--	--	1
France	--	--	1	--	(4/)	1	56
Germany	--	--	12	15	14	41	492
Hong Kong	--	--	--	--	--	--	30
Hungary	--	--	--	--	4	4	11
India	--	--	--	(4/)	2	3	115
Indonesia	--	--	--	--	(4/)	(4/)	1
Ireland	--	--	--	--	--	--	9
Israel	--	--	--	--	(4/)	(4/)	45
Italy	--	--	1	2	(4/)	3	72
Japan	--	--	12	1	2	15	82
Korea, Republic of	--	--	--	(4/)	(4/)	(4/)	15
Luxembourg	--	--	--	2	--	2	9
Malaysia	--	--	--	--	--	--	1
Mexico	--	--	1	1	2	4	49
Netherlands	--	--	--	(4/)	(4/)	(4/)	73
New Zealand	--	--	--	--	(4/)	(4/)	(4/)
Panama	--	--	--	--	--	--	1
Peru	--	--	(4/)	--	--	(4/)	(4/)
Poland	--	--	--	--	--	--	2
Singapore	--	--	(4/)	--	(4/)	(4/)	7
South Africa	--	--	--	--	--	--	21
Spain	--	--	--	(4/)	1	2	7
Sweden	--	--	--	11	--	11	82
Switzerland	--	--	--	(4/)	(4/)	(4/)	23
Taiwan	--	--	3	(4/)	(4/)	3	20
Thailand	--	--	--	--	--	--	1
Turkey	--	--	--	--	--	--	1
United Kingdom	--	--	3	5	2	10	65
Venezuela	--	--	--	(4/)	--	(4/)	3
Other	--	--	--	--	(4/)	(4/)	3
Total	--	--	36	59	37	132	1,760
Total, year to date	24	102	620	606	410	1,760	XX

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Tungsten content estimated from reported gross weight.

3/ Includes wrought tungsten, ferrotungsten, and other tungstates. Tungsten content estimated in part.

4/ Less than 1/2 unit.

Note: Estimated exports of waste and scrap in October 1999 totaled 63 metric tons, tungsten content.

Source: Bureau of the Census.